

BEFORE THE OFFICE OF THE COMMISSIONER OF RAILROADS

STATE OF WISCONSIN

Petition of the Burlington Northern and Santa Fe Railway Co. for a Determination of the Adequacy of Warning Devices at the Grade Crossing of Its Tracks with Lytle Road in the Town of Onalaska, La Crosse County

9020-RX-146

FINDINGS OF FACT AND ORDER

The Burlington Northern and Santa Fe Railway Co. (BNSF) filed a petition with the Office of the Commissioner of Railroads (OCR) for a determination under §195.28, Stats., of the adequacy of warning devices at the grade crossing of its tracks with Lytle Road in the Town of Onalaska, La Crosse County (Crossing No. 079 906D).

An OCR investigator inspected the crossings in October and November 2004. The November inspection included a meeting with a representative of the BNSF and the Commissioner. No hearing was held.

Findings of Fact

THE COMMISSIONER FINDS:

Lytle Road is about 20' wide in the vicinity of the crossing and intersects the railroad tracks at an angle of 90°. The roadway approaches to the crossing are essentially level. Lytle Road carries an average daily traffic (ADT) of 193 at a legal speed limit of 55 mph (unposted). Actual speeds are generally considerably lower than 55 mph due to the proximity of the CTH 'Z' intersection (290' to the southwest). In any event there are stop signs at the crossing.

The BNSF operates 43 train movements per day on average over the crossing at a timetable speed of 60 mph. The number of train movements is sometimes higher on a seasonal basis. The crossing consists of two mainline tracks.

At all crossings, except those with gates, a driver stopped 15' short of the near rail must be able to see far enough down the track, in both directions, to determine if sufficient time exists for moving their vehicle safely across the tracks to a point 15' past the far rail, prior to the arrival of a train. Required clearing sight distance along both directions of the track, from the stopped position of the vehicle, is dependent upon the maximum train speed and the acceleration characteristics of the "design" vehicle. The necessary clearing sight distance at the Lytle Road crossing is 1345'. The available clearing sight distance is over 2000'.

The exposure factor at this crossing is 8300. The exposure factor equals the product of the number of trains per day and the number of highway vehicles per day, which yields a numerical value for the potential conflicts each day at the crossing.

One train-vehicle accident has occurred at this crossing since 1973. The crash occurred in 1999.

Lytle Road extends from CTH 'Z' across the tracks and eventually to a boat landing and fishing dock. A Boy Scout camp is located between CTH 'Z' and the crossing. The presence of this camp and the boating and fishing facilities means there are probably many non-local users of the crossing. These non-local users are likely not familiar with the number and speed of trains using the crossing.

An accident prediction model developed by the Federal Railroad Administration (FRA) allows a projection of expected future accidents based on a number of factors including train volume and speed, highway volume and accident history. The model can be used to compare the expected accident rates given different warning devices. The predicted rate, however, is only one tool for evaluating safety improvements and does not replace sound judgment based on a consideration of all known factors.

The Lytle Road crossing has a predicted accident rate of 0.11 accidents per year, or one accident every 9 years, with the present warning devices.

The Wisconsin Department of Transportation has produced a benefit-cost analysis for all at-grade crossings in the state. Installing new automatic flashing lights with gates and constant warning time circuitry at the Lytle Road crossing has a net benefit of about \$621,000. The benefit-cost ratio is about 4.31 meaning that the public will receive \$4.31 in safety benefits for each dollar expended.

Accidents that do occur here will likely be quite serious if a through train is involved due to their 60 mph speed. Train speed is strongly correlated with fatalities in train/vehicle accidents. More specifically, crossings with train speeds of 40 mph and over have a disproportionate number of fatalities. According to Federal Railroad Administration (FRA) statistics, nationally, in 1994 71% of fatalities occurred at crossings with train speeds of 40 mph+, even though only 26% of all crossings had train speeds of 40 mph+.

The crossing is presently protected with advance warning signs, reflective crossbucks, and stop signs. The existing warning devices are inadequate. The existing warning devices will be adequate until such time as the new warning devices are installed. In order to adequately protect public safety 12" LED automatic flashing lights with gates and constant warning time circuitry are needed based on the high net benefit, number and speed of trains, and many non-local users.

Constant warning time circuitry adjusts for train speed and causes the crossing signals to always operate for the same amount of time before the train reaches the crossing, regardless of train speed. A motion detector simply detects the train operation, but does not adjust for train speed so that the amount of warning time varies based on train speed.

Light emitting diodes (LED) lamps replace incandescent bulbs. LEDs have higher conspicuity, a wider cone of vision, and longer life than incandescent lights. LEDs are especially useful on east-west roadways where the rising and setting sun may make the signals difficult to see.

Source of funding: The cost of the signal materials (including shipping costs) shall be paid from DOT funds. The BNSF has agreed to pay any other costs needed to install the signals and gates.

Conclusion on the Issue

THE COMMISSIONER CONCLUDES:

That in order to adequately protect and promote public safety, it is necessary to install and maintain 12" LED automatic flashing lights with gates and constant warning time circuitry at the crossing of the tracks of Burlington Northern and Santa Fe Railway Co. with Lytle Road in the Town of Onalaska, La Crosse County.

Conclusion of Law

THE COMMISSIONER CONCLUDES:

That the jurisdiction of the Office of the Commissioner of Railroads under §195.28, Stats., extends to this matter. Accordingly, the Office enters an order consistent with the findings of fact.

Order

THE COMMISSIONER ORDERS:

1. That the **Burlington Northern and Santa Fe Railway Co.** shall install and maintain 12" LED automatic flashing lights with gates, and constant warning time circuitry with appropriate appurtenances in accordance with such plans as are filed with and approved by the Office of the Commissioner of Railroads at the crossing of its tracks with Lytle Road at-grade in the Town of Onalaska, La Crosse County by **December 31, 2005** (Crossing No. 079 906D).

2. That the **Burlington Northern and Santa Fe Railway Co.** shall submit to the Office of the Commissioner of Railroads signal and circuit plans with the cost estimate of its proposed installation and upon completion of the signal project, a detailed statement of the actual cost to the Office and to the Wisconsin Department of Transportation.

3. That the signal installation work herein ordered shall not begin until the district office of the Wisconsin Department of Transportation informs the railroad that they may start such work and such start notice will not be issued until appropriate federal aid or other funding arrangements have been assured. The cost of the new project initiated before the start notice will not be reimbursed with public funds and shall be the responsibility of the railroad.

4. That the **Wisconsin Department of Transportation** shall bear the cost of the crossing signals materials (including shipping costs). The **Burlington Northern and Santa Fe Railway Co.** has agreed to pay any other costs necessary to install the ordered warning devices. The Burlington Northern and Santa Fe Railway Co. shall also pay any cost assessed to the railroad pursuant to §195.60, Stats., for the investigation of this matter by the Office. The railroad shall not pass on those assessment costs either directly or indirectly.

5. That if the petitioner, railroad or any interested party objects to this order and requests a hearing within 20 days of the date of this order in writing, the Office will hold a public hearing.

6. That jurisdiction is retained.

Dated at Madison, Wisconsin, _____.

By the Office of the Commissioner of Railroads.

Rodney W. Kreunen
Commissioner of Railroads

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